

INL Intelligence

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A high-level monthly briefing on operations and activities at the U.S. Department of Energy's Idaho National Laboratory
Work at the lab advances the Department's strategic goals in the areas of energy, environment, defense and science.

■ New INL Center Names Director

Idaho National Laboratory's newly launched Center for Advanced Modeling and Simulation this month introduced its first director. And Paul Meakin is already hard at work establishing the center, called CAMS, which will operate similar to a university supercomputing center. An initial core staff of six with affiliates in other divisions will support scientists whose research requires high-level computing. CAMS will buy new computers and will gain access for lab scientists to high-performance machines elsewhere, when needed. Meakin has led subsurface science modeling research at INL since 2001 and is the author of more than 340 scientific papers. A recent survey named him the 79th most-cited physicist in the world.

■ Department of Homeland Security Turns to Idaho for Explosives Detection Help

Two Idaho National Laboratory employees have been selected by the U.S. Department of Homeland Security to assist in research and development of detection methods and countermeasures for explosives and improvised explosive devices. Ernie Cespedes and John Weathersby were among six individuals selected as Thrust Area Coordinators for explosives R&D work with DHS. Beginning in January, Cespedes will lead the vehicle-borne improvised explosive device program area, while Weathersby will lead the explosives R&D operations program area. Both Cespedes and Weathersby are nationally recognized for their expertise in sensor-related R&D applications and blast effects and protective structures, respectively.

■ Regional Researchers Study Carbon Sequestration Options

Regional scientists are collaborating on an ambitious study to determine whether the ground beneath portions of the Pacific Northwest could hold a geologic answer to one of the world's most pressing environmental problems – too much carbon dioxide in the air. The greenhouse gas traps heat to contribute to a slow warming of the atmosphere. Along with researchers from Idaho's three universities, geologists from Idaho National Laboratory will test how well the volcanic rocks abundant below the Columbia and Snake river plains store carbon dioxide. In the Big Sky partnership's area, which includes Idaho, Montana, Wyoming, South Dakota and eastern Washington and Oregon, volcanic basalt covers 85,000 square miles – an area equivalent to the state of Idaho. Preliminary calculations by the group show this basalt could store more than 100 billion tons of carbon dioxide – as much as all the coal-burning power plants in the United States produce in 20 years.

■ INL-developed Tool Helps Find Hydropower Sites

Idaho National Laboratory's Hydropower Program has developed a Virtual Hydropower Prospector (VHP) tool that allows people to find promising sites for hydropower development right from their computer screens. The unique tool displays the power potential of every stream in the country. The application brings together topographic, hydrologic, demographic, infrastructure, land-use and water-energy resource information never before gathered in one place. The free-use program can be accessed from the DOE Hydropower Program's Web site at <http://hydropower.inl.gov>. An "Introduction to New Users" on the VHP homepage provides a quick overview.

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